Avinashilingam Institute for Home Science and Higher Education for Women [now MoE]
(Deemed to be University Estd. u/s 3 of UGC Act 1956, Category 'A' by MHRD)
Re-accredited with 'A++' Grade by NAAC. Recognised by UGC Under Section 12B
Coimbatore - 641 043, Tamil Nadu, India

Department of Computer Science
Continuous Internal Assessment I – August 2025

Class : III UG V Semester **Time : 2 Hours**
Major: Computer Science **Max Marks: 60**

Course Outcomes:
CO1: Obtain knowledge to model databases using ER diagram and creating schema.
CO2: Develop query processing skills and normalization of databases.
CO3: Acquire knowledge on Indexing and Concurrency Control.
CO4: Trained skill to solve problems in Database Programming.
CO5: Understand the database concepts in Big Data.

23BCSC09 Database Management System

Part – A **6x 1=6**

Circle the correct answer

1. Which of the following is not a type of database model? CO1K1
a. Hierarchical model b.Network model c.Relational model d.Sequential model

2.In an ER diagram, a diamond shape represents: CO1K1
a. Entity b. Attribute c. Relationship d. Primary Key

3.Which of the following constraints ensures that a column cannot have a NULL value?
a. UNIQUE b. PRIMARY KEY c. NOT NULL d. FOREIGN KEY CO2K2

4.Which type of SQL join returns all records from both tables when there is a match in either table? CO2K3
a. INNER JOIN b.LEFT JOIN c.RIGHT JOIN d. FULL OUTER JOIN

5.Which normal form eliminates partial dependency? CO2K3
a. 1NF b. 2NF c. 3NF d. BCNF

6.What is the main advantage of using multilevel indexing in DBMS? CO3K2
a. It increases data redundancy b. It reduces the number of disk accesses
c. It eliminates the need for primary keys d. It converts a relational database into a hierarchical one

Part B **3 x 6 = 18**

Answer ALL questions
Each answer should not exceed 400 words or two pages

7. a. Explain the basic concepts and terminology of Databases. CO1K2
(OR)

7. b. Write Notes on Various Types of Database Management Systems.	CO1K2
8. a. Discuss the Conceptual and Physical Modelling of Databases.	CO1K2
(OR)	
8. b. Write notes on views, its creation, access, uses with examples.	CO2K3
9.a. Explain SET Operations with suitable example.	CO2K3
(OR)	
9.b. Elaborate on the concept of RAID.	CO3K2

Part C **3 x 12 = 36**

Answer ALL questions

Each answer should not exceed 800 words or four pages

10.a. Discuss on Relations, Schema, Constraints and Queries.	CO1K2
(OR)	
10.b. Explain Entity Relationship Modelling Using suitable Examples.	CO1K3
11.a. Explain JOINS and Nested Queries with suitable examples.	CO2K3
(OR)	
11.b. Discuss on Relational Algebra operations with examples.	CO2K2
12.a. Write notes on Normalization and the various Normal Forms.	CO2K3
(OR)	
12. b.Explain the concept of B-Trees and B+ Trees.	CO3K2

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Staff-In-Charge: Dr.G.Sudhamathy & Mrs. Divya